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EXAMINER

JOHANNSEN, DIANA B

ART UNIT PAPER NUMBER

1634

DATE MAILED: 07/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/512882

Applicant(s)

Bouckaert, A.M.

Examiner

Johannsen, D

Group Art Unit

1634

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 9-13-01
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-31 and 34-41 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-31 and 34-41 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☒ Other Detailed Action

Office Action Summary

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FINAL ACTION

1. This action is in response to paper no. 8 filed September 13, 2001. Claims 32-33 have been canceled, claims 1, 4, 7, 10, 15, 22-24, 27-31, and 34-40 have been amended, and claim 41 has been added. Claims 1-31 and 34-41 are now pending and under consideration. The amendments and arguments have been thoroughly reviewed, but are not persuasive for the reasons that follow. Any rejections not reiterated in this action have been withdrawn as being obviated by the amendment of the claims. **This action is FINAL.**
2. It is noted that the paper copy of the Sequence Listing filed September 13, 2001, and the computer readable copy of the Sequence Listing filed June 6, 2001, have been entered.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

THE FOLLOWING ARE NEW GROUNDS OF OBJECTION NECESSITATED BY APPLICANTS AMENDMENTS TO THE CLAIMS:

4. Claim 41 is objected to because of the following informalities: a period is set forth in the middle of the claim, at the end of step i) c). It is further noted that the "and" at the end of step ii) should be deleted. Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

5. Claims 1-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

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the invention, for the reasons stated below and in the Office action of paper no. 4. **It is noted that applicants' amendments necessitated the inclusion of claim 41 in this rejection.**

Claims 1-28 and 37-40 are indefinite over the recitation of the term "identifying". The specification does not provide a clear definitions of this terminology, and it is unclear as to what actual steps would be encompassed by this language. The response traverses the rejection on the following grounds. The response argues that "'identifying' an amino acid sequence as being one that is a conserved portion of a polypeptide" is an active step, and that the active step of "identifying" may encompass both mental and non-mental activities. Applicants' arguments have been thoroughly considered but are not persuasive. It remains unclear as to what information must have been obtained or acquired - via active and/or mental processes - in order for "identifying" to have been accomplished. For example, claim 1 requires a step of "identifying an amino acid sequence of a conserved region." Is this language intended to suggest that a practitioner must, e.g., determine that a particular property or sequence is present in order for a sequence to be "identified," or would this language encompass designation of a sequence as an "amino acid sequence of a conserved region" by a practitioner? The vagueness of the term "identifying" renders the claims unclear, as this language does not apprise one of skill in the art as to what must actually be accomplished in order to perform the claimed methods. Accordingly, this rejection is maintained.

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Claims 1-21 are indefinite over the recitation of the limitation "the target plant class" in claim 21, (b)(ii). There is insufficient antecedent basis for this limitation in the claims. The response does not traverse the rejection. This rejection is maintained.

Claims 1-21 are indefinite for failing to recite a final process step that clearly relates back to the claim preamble. The claims are drawn to methods for isolating a "target polynucleotide encoding a target polypeptide", yet recite a final process step of isolating a duplex. While claim 1 has been amended so as to recite "isolating the duplex comprising the target polynucleotide," it remains unclear as to whether the claims are intended to require isolation of the target polynucleotide or isolation of a duplex, whether isolation of a "duplex comprising the target polynucleotide" would constitute isolation of target polynucleotide (as was clarified in applicants' amendments to claims 38-40), etc. Accordingly, this rejection is maintained.

Claim 23 is indefinite over the recitation of the limitation "the target plant species" in (b)(ii). There is insufficient antecedent basis for these limitations in the claim. The response does not traverse the rejection. This rejection is maintained.

Claims 29-31, 34-36 and 41 are indefinite over the recitation of the terms "selecting" and "substituting". With respect to claim 41, it is noted that applicants' amendments necessitated the inclusion of the claim in this rejection. It is unclear as to whether the terms "selecting" and "substituting" refer to actual active method steps, or whether the claims may encompass, e.g., a mental process of "selecting" a sequence or "substituting" a nucleotide. With respect to the rejection of claims 29-31 and 34-36 is the Office action of paper no. 4, the response traverses the rejection on the grounds that "selecting" and "substituting" are active steps. The response argues

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that while these terms "have more of a 'mental' character, than a term such as 'heating' or the like," this fact "does not establish that these terms are not active steps." The response states that these terms "clearly state what the practitioner is doing at each of these steps of the process." Applicants' arguments have been thoroughly considered but are not persuasive. It remains unclear as to whether the practice of steps of "selecting" and/or "substituting" would require anything more than a thought process; accordingly, the claims do not in fact "clearly state what the practitioner is doing at each" step of the process, as asserted by applicants' response. Further, while the response asserts that "selecting" and "substituting" are active steps, neither the language of the claims nor, e.g., a definition in the specification provide support for this assertion. Accordingly, it remains unclear as to what steps must actually be performed in order to practice the methods of the claims. This rejection is maintained.

**THE FOLLOWING ARE NEW GROUNDS OF OBJECTION NECESSITATED BY
APPLICANTS AMENDMENTS TO THE CLAIMS:**

Claims 1-21 are indefinite over the recitation of the limitation "the duplex comprising the target polynucleotide" in claim 1. There is insufficient antecedent basis for this limitation in the claims.

Claims 22-23 are indefinite over the recitation of the limitation "the at least three codons of the oligonucleotide" in (b)(ii). There is insufficient antecedent basis for this limitation in the claims.

Claims 22, 24-27, and 37 are indefinite over the recitation of the language "isolating...as the target polynucleotide" in claims 22, 24, and 37. It is unclear as to whether this language is

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intended to indicate that "the elongation product" (in the case of claims 22 and 37) and "the product" (in the case of claims 24-27) are considered to constitute the "target polynucleotide" within the context of the claims, or whether this language "isolating...as the target polynucleotide" is intended to indicate that "isolating" encompasses steps of, e.g., manipulating the "elongation product"/"product" so as to isolate and separate the "target polynucleotide." Clarification is required.

Claims 23 and 28 are indefinite over the recitation of the language "determining the nucleotide sequence.....thereby identifying the target polynucleotide." It is unclear as to whether this language is intended to indicate that determining the nucleotide sequence of the "product" is synonymous with "identifying" the target polynucleotide, or whether this language is intended to indicate that the sequence, once determined, allows for or is employed in identification. Clarification is required.

Claim 29 is indefinite because it is unclear as to whether the claim is intended to be drawn to a method for "designing a nucleotide sequence for an oligonucleotide primer," as recited in the claim preamble, or to a method of "obtaining a nucleotide sequence for an oligonucleotide primer," as recited in the final process step of the claim. Clarification is required with respect to what must be accomplished to perform the claimed method and with respect to how the "obtaining" step relates to the "designing" of the preamble.

Claim 30 is indefinite over the recitation of the limitation "the designed sequence." There is insufficient antecedent basis for this limitation in the claim.

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Claims 31 and 34-36 are indefinite over the recitation of the limitations "said upstream oligonucleotide primer and downstream oligonucleotide primer" and "the nucleotide sequences designed according to steps (b) and (c)" in claim 31. There is insufficient antecedent basis for these limitations in the claims.

Claims 34-36 are indefinite over the recitation of the limitation "the product of said polymerase chain reaction of step (c)" in claims 34 and 35. There is insufficient antecedent basis for this limitation in the claim.

Claim 36 is indefinite due to the improper expression of alternative limitations.

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. MPEP 2173.05(h). This rejection could be overcome by amending the claim to recite either "The method of claim 31, claim 34, or claim 35," or "The method of any one of claims 31, 34, and 35."

Claim 38 is indefinite over the recitation of the limitation "a plant family of target plant species." It is unclear as to whether the recitation of "target plant species" in this phrase is intended to refer back to the previously recited "target plant species," or whether this language is now intended to encompass any "plant family of target plant species." Clarification is required.

Claim 39 is indefinite over the recitation of the phrase "a genus of the target plant species." As a particular species may belong to only one genus, the language "a genus of the target plant species" is confusing, as this language suggests that the claim might encompass more than one genus. Clarification is required.

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Claim 41 is indefinite over the recitation of the limitation "the nucleotide sequences designed according to steps (b) and (c)." There is insufficient antecedent basis for this limitation in the claims.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diana Johannsen whose telephone number is 703/305-0761. The examiner can normally be reached on Monday-Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached at 703/308-1152. The fax phone number for the

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Technology Center where this application or proceeding is assigned is 703/305-3014 or 305-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0196.

Diana B. Johannsen

July 11, 2002


W. Gary Jones
Supervisory Patent Examiner
Technology Center 1600